

BIBLIOGRAPHICAL NOTICE.

The Larvæ of the British Butterflies and Moths. By the late WILLIAM BUCKLER. Edited by H. T. STANTON. Vols I. and II. 8vo. London: Ray Society, 1886, 1887.

ALTHOUGH we have already many descriptions and figures of the larvæ and pupæ of the British Lepidoptera, we fancy that these volumes will be received with a hearty welcome by all students of the order. In fact a knowledge of the preparatory states of these insects is of so much consequence even to the mere collector, whose success in rearing larvæ, especially from the egg, depends entirely upon his knowing the species to which they belong and the proper food to offer them, that the series of figures, descriptions, and notes on habits, the publication of which has thus been commenced by the Ray Society, will appeal to a very large constituency.

Of the two volumes already published the first contains figures and histories of the larvæ of the British Butterflies; while in the second the Hawk-moths and twenty-seven species of Bombycæ are treated in the same fashion. The third volume, to be brought out next year, will include the remainder of the last-named group.

The work, as explained by the editor in his preface to the first volume, is founded upon the labours of the late Mr. William Buckler, an artist and miniature painter of repute, who, after devoting some attention to entomology, was induced to undertake the illustration of the editor's great 'Natural History of the Tineina,' when the original artist gave up the work. From the year 1857, when he commenced his labours in figuring the Tineina and their transformations, Mr. Buckler seems to have turned his attention particularly to the larvæ of our indigenous Lepidoptera, and from that time until his death, in 1884, he was actively engaged in the study of their transformation, drawing up detailed notes upon their life-history and figuring them in the most careful manner. At intervals he published notices of his observations in the 'Entomologist's Monthly Magazine;' but these articles included only a portion of the results of his researches, and they were not accompanied by any figures, a great collection of which it was well known that the deceased entomologist had left behind him. These and four volumes of note-books were obtained from his executor by the Council of the Ray Society, who very justly thought it "highly desirable that the labours of half a lifetime should not be lost to science."

During his investigations of the preparatory states of the British Lepidoptera Mr. Buckler was in constant correspondence with the Rev. John Hellins, of Exeter, also an enthusiastic cultivator of the same field of research, who has now, we regret to say, followed his friend and coadjutor. Mr. Hellins also published many descriptions of Lepidopterous larvæ; and it appears that for many years it was the custom of each of them to send to the other for revision the MSS. of their respective papers, so that all their work may to a

certain extent be regarded as the result of their joint labours. In the present volume the same relation is preserved—the published contributions of both authors are reprinted, together with extracts from the MS. note-books above mentioned; while Mr. Hellins has supplemented the work of his friend with an appendix containing descriptions of those larvæ with regard to which nothing was written by Mr. Buckler, and with notes upon many of the other species. We have thus at the hands of these experienced and indefatigable workers a series of life-histories of the larger Lepidoptera of these islands of the most minute description, and we can only hope that the untimely decease of Mr. Hellins may not prove an obstacle in the way of the issue of the succeeding volumes.

Of the figures accompanying these descriptions, and which occupy thirty-five plates in the first two volumes, we can only say that in general they are very beautiful and life-like representations of the objects. In some cases, indeed, the colours, especially reds and greens, strike us as being rather too bright; but on the whole the figures leave little or nothing to be desired, and we can congratulate the student of British Lepidoptera on having furnished to him such a magnificent series of figures of the larvæ of nearly all his favourite insects. Of many species the caterpillars are figured at different ages, and occasionally the pupæ are illustrated.

A particularly valuable feature of the work is the addition of tables of the parasites which have been observed to issue from the larvæ and pupæ of the insects described in each volume. These tables have been furnished to the editor by Mr. G. C. Bignell, and it is to be hoped that their publication will induce others to take up a line of investigation which must lead to most interesting results.

MISCELLANEOUS.

Note on Tudicula inermis &c. By EDGAR A. SMITH.

THERE are three species at present described which belong to *Tudicula*, namely *T. armigera*, A. Adams, *T. spinosa*, H. & A. Adams, and *T. inermis*, Angas. All are from the shores of Australia. The first and second species have been found at various localities on the coast of Queensland. *T. spinosa* also occurs in Torres Straits. The other species inhabits the western side of the continent. Mr. Angas in describing this species observes that “the exact locality of the habitat could not be satisfactorily determined,” as the specimens he had under examination were obtained from a dealer at Singapore.

The British Museum has recently acquired, through the liberality of Mr. T. H. Haynes, three specimens of this rare shell, collected by that gentleman at Exmouth Gulf, West Australia. Mr. Brazier, of Sydney, also informs me that he possesses examples of this species from Nicol Bay, somewhat further to the north-east of Exmouth